Claims 1- 25 and 36-38 are pending. No claims stand allowed.

Claims 1 has been amended to correct minor informalities.

No new matter has been introduced by this amendment.

## Rejections of Claims under 35 U.S.C. §112:

Claims 1-25 and 36-38 stand rejected under 35 U.S.C. §112 as allegedly failing to comply with the written description requirement. The Examiner specifically alleges that the present specification provides no support for the newly added limitation of "the volume information in the second and any subsequent volumes under the first configuration not being preserved when the memory card is operated under the second configuration." Applicants respectfully disagree for the reasons set forth below.

As described in paragraph [0046] of the present specification and FIG. 5B, when the memory card is configured to have multiple volumes (i.e., the first configuration), the volume information 522 for the first volume is stored in a portion starting form address $000000_{HEX}$, and the volume information 526 for the second volume is stored in a portion starting from address $400000_{HEX}$. On the other hand, as described in paragraph [0045] of the present specification and FIG. 5A, when the memory card is configured to have a single volume (i.e., the second configuration), the volume information 502 for the first (single) volume is stored in a portion starting from address $000000_{HEX}$, and the remaining portion, which includes the portion starting from addresses $400000_{HEX}$, stores the host supplied data 504. That is, under the second configuration, no volume information other than that for the first volume exists. Thus, it is apparent that the volume information 526 in the second volume (and any subsequent volumes) under the first configuration (FIG. 5B) is not present, i.e., not preserved, when the memory card is operated under the second configuration (FIG. 5A).

Similarly, as described in paragraph [0051] of the present specification and FIG. 7, when the switch is in position A, which corresponds to the first volume of the multiple volume (i.e., the first) configuration, the FAT-16 system information (volume information) in the region 702 (host addresses $000000_{HEX}$ -$0003FF_{HEX}$) is mapped into the region 722 (card addresses $001000_{HEX}$ -$0013FF_{HEX}$). When the switch is in position B, which corresponds to the second volume of the multiple volume (i.e., the first) configuration, the FAT-16 system information for this volume

stored in the region 703 (host addresses $000000_{HEX}$ -$0003FF_{HEX}$) is mapped into the region 723 (card addresses $001400_{HEX}$ -$0017FF_{HEX}$) next to the region 722. Thus, under the multiple volume (i.e., the first) configuration, the memory card includes the volume information (the regions 722 and 723) for both of the first and second volumes, and user data for both of the first and second volumes stored in the data regions 724 and 725, respectively. This configuration ensures that the system data (volume information) and the user data for both volumes can co-exist at the same time without loss of data (see the end of paragraph [0051] of the present specification).

On the other hand, when the switch is in position C, which corresponds to the third volume which is the single volume under the single volume (i.e., the second) configuration, the FAT-32 system information (volume information) in the region 701 (host addresses $000000_{HEX}$ -$000FFF_{HEX}$) is mapped into the region 721 (card addresses $000000_{HEX}$ -$000FFF_{HEX}$), while the data region 711 (host addresses $001000_{HEX}$ -$7A2B7F_{HEX}$) is mapped into the region 723, 724, and 725 (card addresses $001400_{HEX}$ -$7A2F7F_{HEX}$), as shown in FIG. 7. Thus, under the single volume (i.e., the second) configuration, the memory card includes the region 721 for the FAT-32 system information (volume information), and regions 723-725 for storing the user data. The region 723 which stores volume information for the second volume under the first configuration (as described above) is now stores the user data under the second configuration. It should be noted that the region 722 in the memory card is not used under the second configuration, as shown in FIG. 7. Thus, it is apparent that the volume information of the second volume (stored in the region 723) for the second volume (and any subsequent volumes) under the first configuration is not preserved when the memory card is operated under the second configuration because the same region 723 is allocated to store the user data under the second configuration.

Although the present specification does not explicitly use the words such as "not preserved," it is inherent in the claimed invention that the volume information of the second and any subsequent volumes is not preserved or stored at any place when the memory card is operated under the second (single-volume) configuration. This is because, first, the present specification does not describe that the volume information of the second and any subsequent volumes is preserved or stored at any place when the memory card is operated under the second (single-volume) configuration. Second, although the present invention provides a memory card with compatibility between two different types of addressing: FAT-16 format (the first configuration) and FAT-32 format (the second configuration), it is first determined whether the

memory card has the first configuration or the second configuration, and then the memory card is operated in accordance with the determined configuration. Thus, the two different configurations or file formats do <u>not</u> coexist in the memory card. Accordingly, when the memory card is being operated under the second configuration, there is no reason and no space to retain the volume information of the second and any subsequent volumes which only exists under the first (multi-volume) configuration. Without any description stating otherwise, there is no possibility for those of ordinary skill in the art to understand that the volume information of the second and any subsequent volumes is preserved or stored at any place when the memory card is operated under the second (single-volume) configuration. By disclosing in a patent application a device that inherently performs a function or has a property, operates according to a theory or has an advantage, a patent application necessarily discloses that function, theory or advantage, even though it says nothing explicit concerning it. The application may later be amended to recite the function, theory or advantage without introducing prohibited new matter. *In re Reynolds*, 443 F.2d 384, 170 USPQ 94 (CCPA 1971); *In re Smythe*, 480 F. 2d 1376, 178 USPQ 279 (CCPA 1973). See also M.P.E.P. §2163.07(a).

Accordingly, the present specification provides support for the limitation of "the volume information in the second and any subsequent volumes under the first configuration not being preserved when the memory card is operated under the second configuration," satisfying the written description requirement. Is respectfully requested that the §112 rejections to the claims be withdrawn.

**Rejections of Claims under 35 U.S.C. § 103:**

Claims 1-10, 13-14, 17-25 and 36-38 stand rejected under 35 U.S.C. §103(a) as being allegedly unpatentable over Suda (U.S. Pat. Application Publication No. 2004/0123059) in view of Moro (U.S. Pat. Application Publication No. 2004/107316) and Murray et al (U.S. Pat. No. 6,185,66). Claims 11-12 and 15-16 also stand rejected under 35 U.S.C. §103(a) as being allegedly unpatentable over Suda in view of Moro and Murray et al., and further in view of Colligan et al. (U.S. Pat. No. 6,519,762). The rejections are respectfully traversed.

In the Office Action, the Examiner acknowledges that Suda does not disclose "(d) operating the memory card in accordance with the second file format by accessing the entire address space of the non-volatile data storage as the single volume when said determining" nor "each range of addresses which stores the volume information in a second and any subsequent

volumes under the first configuration stores user data under the second configuration, <u>the volume information in the second and any subsequent volumes under the first configuration not being preserved when the memory card is operated under the second configuration</u>." However, the Examiner further contends that Moro teaches the operating step (d) above, and that Murray's merging two adjacent partitions teaches "operating a memory as multiple volumes or as a single volume wherein when changing from operating the memory as multiple volumes to operating the memory as a single volume, 'each range of addresses which stores the volume information in a second and any subsequent volumes under the first configuration stores user data under the second configuration,'" and, by ignoring the underlined limitation, that a conventional approach described in Murray teaches "each ranges of addresses which stores the volume information in a second and any subsequent volumes under the first configuration stores user data under the second configuration." Applicant respectfully disagrees for the reasons set forth below.

Claim 1 defines a method for reading data from a memory card that provides non-volatile data storage formed of a single memory array having an address space defined by a contiguous range of addresses. In the claimed invention, the memory card is operated "by accessing the entire address space of the non-volatile data storage as the single volume in accordance with the second file format when said determining (b) determines that the memory card has the second configuration, wherein each range of addresses which stores the volume information in a second and any subsequent volumes under the first configuration stores user data under the second configuration, <u>the volume information in the second and any subsequent volumes under the first configuration not being preserved when the memory card is operated under the second configuration</u>," as recited in claim 1 (<u>emphasis</u> added). As discussed above with respect to the §112 rejection, the underlined limitation should be considered as it is supported by the present specification.

Murray allegedly teaches merging partitions in computer hard disk, by moving one edge of a target partition to overlap one or more neighboring secondary partitions, and modifying or otherwise providing file system data structures in the merged partition to organize and retain the user data of all involved partitions (column 5, lines 61-66). More specifically, the target partition (alleged first volume), which is selected to be a surviving partition, grows (i.e., its boundary is extended) to include adjacent secondary partition(s) (alleged subsequent volumes) (column 10, lines 17-20 and 43-46 of Murray). In Murray, each partition contains system data, and at least one partition contains user data (column 19, lines 56-58). However, in Murray, the system data

of the target partition and the secondary partition(s) is combined, and the combined system data is stored in the target partition (column 20, lines 25-27 of Murray, also see column 15, lines 58-59, and column 24, lines 46-50 thereof). That is, Murray creates a target partition system area which contains the system data formerly contained in the target and secondary partitions (column 20, lines 27-29 of Murray, emphasis added). Accordingly, Murray preservers the system data (alleged volume information) of the secondary partition(s) when it merges partitions (allegedly operates the memory in the single volume), contrary to the claimed invention in which the volume information of the subsequent volumes is not preserved, as recited in claim 1.

In addition, since Murray keeps at least one copy of all system data and user data of all partitions on a disk at all times during the merge (see Abstract, emphasis added), Murray teaches away from accessing (or merging) the entire address space of the disk as the single volume because such a merge leaves no room for keeping a copy of all system data and user data during the merge.

It should be noted that Murray only teaches merging two or more adjacent partitions to reduce the number of partitions of a computer disk which may include different partition types (column 4, lines 37-49 thereof). Since Murray's computer disk 100 has numerous partitions (the alleged volumes) of different file formats, it cannot be determined that the computer disk 100 has the second configuration with a single partition. Murray does not teach or suggest merging all of the partitions such that the entire address space of the computer disk 100 becomes a single partition. Accordingly, Murray also fails to teach or suggest operating the computer disk 100 (the alleged non-volatile data storage) by accessing the entire address space of the computer disk as the single volume when said determining determines the memory card has the second configuration, as required by claim 1 (emphasis added).

Therefore, although Suda may be modified by the teaching of Moro and Murray, the alleged combination still fails to teach or suggest that each range of addresses which stores the volume information in a second and any subsequent volumes under the first configuration stores user data under the second configuration, the volume information in the second and any subsequent volumes under the first configuration not being preserved when the memory card is operated under the second configuration, as recited in claim 1. Accordingly, the claimed invention is not obvious from the alleged combination of Suda, Moro, and Murray.

Other independent claims 13 and 19 include substantially the same distinctive features as claim 1.

Accordingly it is respectfully requested that the rejection of claims 1, 13, and 19 based on Suda, Moro, and Murray be withdrawn.

Dependent Claims

Claims 2-12 and 36 depend from claim 1, claims 14-18 and 37 depend from claim 13, claims 20-25 and 38 depend from claim 19, and thus are also patentably distinct from the cited references for at least the same reasons as those recited above for the respective independent claims, upon which they ultimately depend. These dependent claims recite additional limitations that further distinguish these dependent claims from the cited references. For at least these reasons, the dependent claims are not made obvious by the prior art cited in the Office Action.

Conclusion

Applicant believes that all pending claims are allowable and respectfully requests a Notice of Allowance for this application from the Examiner. Should the Examiner believe that a telephone conference would expedite the prosecution of this application, the undersigned can be reached at the telephone number set out below.

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Respectfully submitted,
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